

# Michigan Intersection Safety Strategy and Near-Term Action Plan



## Governor's Traffic Safety Advisory Commission

### Member agencies:

Michigan Department of Transportation  
Office of Highway Safety Planning  
Michigan Department of State  
Michigan State Police  
Office of Services to the Aging  
Michigan Department of Education  
Michigan Department of Community Health

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## National Background

Nationally, intersection-related crashes represented more than 40 percent of all crashes reported in 2002. This amounted to more than 2.8 million crashes resulting in more than 9,400 fatalities (22% of total fatalities) and nearly 1 million injured citizens (49% of injury crashes). Given the high number of fatalities and injuries, many transportation safety agencies and organizations are developing plans and programs to focus on intersection safety.

A review of national data led to a National Intersection Safety Workshop held in Milwaukee, WI on November 14-16, 2001. Experts from all disciplines of traffic safety developed a strategic **national agenda for intersection safety** providing a blueprint for strategic action at the national, state, and local level aimed to make intersections safer.

Intersection safety is one of the emphasis areas in the Strategic Highway Safety Plan from the American Association of State Highway and Transportation Officials (AASHTO), it is included in the Institute of Transportation Engineers' (ITE) Safety Action Plan, and it is recognized as one of four priority areas in the Federal Highway Administration's Performance Plan.

## Action Plan Development

Michigan's intersection crash data parallels the national data. In 2002, the Governor's Traffic Safety Advisory Commission (GTSAC) identified Intersection Safety as one of its three main issues to address. The GTSAC created an Intersection Safety Action Team and, using the national agenda as a guide, developed the Michigan Intersection Safety Action Plan (ISAP).

Issues and strategies from the national agenda were carried forward into the Michigan plan, as well as other issues and strategies not mentioned in the national plan. The Michigan plan was further enhanced by the addition of near-term action steps.

## The Issue: Dangerous Intersections

In Michigan, there were 113,373 intersection crashes in 2004 representing 30% of all the reported crashes. These intersection crashes resulted in 296 fatalities (25% of all Michigan highway fatalities) and 3,327 incapacitating injuries (32% of all Michigan incapacitating injuries). As depicted in the table, there is a positive, downward trend in the number of intersection crashes, fatalities, and injuries in Michigan. ***In fact there were 20% fewer intersection crashes, 26% fewer fatalities and 47% fewer KA injuries in 2004 than in 1998.***

Year	Intersection Crashes	Percent of Intersection Crashes to Total Crashes	Intersection Fatalities	Percent of Intersection Fatalities to Total Fatalities	KA Intersection Injuries	Pct. of KA Intersection Injuries to Total KA Injuries
1998	142,441	35%	403	29%	6,068	39%
1999	141,052	34%	420	30%	5,569	39%
2000	140,654	33%	413	30%	5,020	38%
2001	126,892	32%	381	29%	4,336	37%
2002	122,361	30%	373	29%	4,071	38%
2003	119,360	30%	337	26%	3,774	33%
2004	113,373	30%	296	25%	3,227	29%

*“K” injury is a death; “A” injury is incapacitating. Use of “KA” refers to any crash in which “K” or “A” injury occurs.*

*Definition:* *An intersection crash is any crash occurring at an intersection or at a driveway within 150 feet of an intersection. Intersection crashes also include crashes coded by the reporting officer as being related to an intersection, regardless of actual distance to the intersection.*

Intersection crash data indicates signalized intersections have a high number of right angle and head-on left turn crashes. These crashes are also responsible for a higher incidence of the “K” and “A” type injuries (defined above). The driver behavior that results in these crashes often involves running the red light. Developing safety initiatives aimed directly at changing driver behavior related to stopping at traffic signals would provide substantial reductions in crashes and related serious injuries.

## A closer review of Michigan's intersection crashes in 1998-2001 reveals:

- **Type of traffic control and related severity (as noted by the police):**
  - 63% of the crashes occurred at signalized intersections (2.6% KA)
  - 37% of the crashes occurred at un-signalized intersections (3.0% KA)
- **Driver's age:**
  - 16-20 years old
    - 8.0 % of licensed Michigan drivers
    - 17.1% of drivers involved in intersection crashes
    - 16.4% of drivers involved in serious (KA) intersection crashes
  - 65 years and older
    - 14.2 % of licensed Michigan drivers
    - 8.8 % of drivers involved in intersection crashes
    - 10.3% of drivers involved in serious (KA) intersection crashes
- **Crash patterns by type of traffic control:**
  - Signalized: 37% rear end 28% right angle 8% head-on left turns
  - Stop control: 63% right angle 13% rear end 6% fixed object
  - Yield control: 68% right angle 9% rear end 4% fixed object
- **Driver behavior (based on hazardous actions):**
  - Failed to yield: 31% of crashes
  - Failed to stop/clear distance: 29% of crashes
  - Running red light: 17% of signalized crashes (36% of signalized KA crashes)
  - Running stop sign: 11% of stop-controlled crashes (24% of stop-controlled KA crashes)
  - Speeding: 4% of crashes
- **Frequency and Severity of common intersection crash types:**
  - Right angle: 31% of crashes (4.4% KA)
  - Rear end: 26% of crashes (1.0% KA)
  - Driveway-related: 12% of crashes (1.6% KA)
  - Same direction sideswipe: 7% of crashes (0.6% KA)
  - Head-on left turn: 6% of crashes (5.7% KA)
  - Fixed object: 4% of crashes (3.7% KA)
  - Pedestrian/Bicycle: 2% of crashes (33.0% KA)

**NOTE:** Beginning in 2004, the property damage reporting threshold in Michigan increases from \$400 to \$1,000. This will not affect the reporting of injury or fatal crashes, but will result in a possible reduction of property damage crashes. The resulting reduction may cause an artificially inflated increase in KA crash percentages as reported above.

## Michigan Intersection Safety Goals

The goal of this Intersection Safety Action Plan is to outline a course of action that, when followed, targets a reduction in the number and severity of intersection-related crashes in Michigan by 2009, as follows:

- Number of intersection crashes < 100,000
- Number of intersection fatalities < 300
- Number of KA intersection injuries < 3,000

Year	Intersection Crashes	Intersection Fatalities	KA Intersection Injuries
2003	119,161	362	3,918
2004	115,961	351	3,765
2005	112,761	340	3,612
2006	109,561	329	3,459
2007	106,361	318	3,306
2008	103,161	307	3,153
2009	99,961	296	3,000

*Note: For analysis purposes only, an assumption was made that a constant reduction in crash fatalities and injuries will be achieved each year.*

**This results in the reduction of more than 22,000 intersection crashes, 77 fatalities and 1,071 serious injuries.**

## Cost/Benefit Analysis

Achieving a reduction in the number of intersection fatalities to 300 in five years should result in saving approximately 150 saved lives over those five years (10 + 20 + 30 + 40 + 50).

The National Safety Council estimates that the calculable cost of each highway crash fatality is \$1,090,000. Non-fatal disabling injuries are estimated to cost \$49,900, and the cost for minor injuries/ property damage are estimated to be \$6,200.

Eliminating 150 deaths in Michigan over five years would save more than \$163 million. The associated reduction of injuries and property damage would increase the savings over five years to \$828 million.

# Michigan Intersection Safety Issues, Strategies, and Near-Term Actions



= High Priority Action

**Bold** = Lower priority and/or lower cost Action

### ***Issues Addressed:***

1. To the extent that targeted legislation can assist the overall highway safety effort, it is important that the Legislature understand the benefits of traffic safety programs, the valuable role of crash data in such programs, and the need for continuing crash data support.
2. To the extent that budget and policy decisions can affect highway safety, it is important that leaders and staff within the political system recognize the benefits of promoting and investing in safety programs.
3. Within the highway safety community, there is a need for strong and active leadership with a focus on intersection safety.
4. Support for safety must include all agencies so there is a unified voice for traffic safety.

### ***Strategies:***

1. Provide coordinated advisory group input to the Legislature, pro-actively and re-actively, on safety issues:
  - Seek an ongoing appropriation to provide a dedicated funding to operate the crash data system
  - Develop and provide balanced information on sensitive issues – position papers, etc.
2. Help communities and political leaders understand the benefits of crash countermeasures.
  - Raise awareness of intersection problems with key state, county, and local leaders.
  - Show benefits/costs to decision-makers (intersection safety improvement versus crash and medical costs).
  - Provide examples of safety measures: AAA Road Improvement Demonstration program results, signal re-timing, etc. Offer support materials to these officials for use in discussions with colleagues and constituents.
  - Demonstrate the economic and societal benefits of increased intersection safety.
  - Provide examples of ‘model’ legislation from other states.
3. Provide recognition to jurisdictions and/or officials who have brought about a significant decrease in intersection crashes. Help local officials understand the data for their own region.
4. Develop and target access-control education for elected officials, zoning officials, planning personnel who grant access, and property owners. Provide education at all levels. Demonstrate why access control such an important part of intersection safety.

### ***Near-term Action Plan:***

1. The GTSAC will develop a short program for presentation to decision-makers at the state and local level. The program will emphasize:
  - Fatalities, injuries and the overall cost of crashes at intersections
  - Cost effectiveness of a wide variety of improvements and solutions
    - AAA Road Improvement Demonstration Program
    - Roundabouts
    - Signal timing and emergency-vehicle pre-emption
    - Other treatments as identified.

2. **The Intersection Safety Action Team will develop annual awards that recognize actions to improve intersection safety, and add them to the existing structure for awards presented at the annual Michigan Traffic Safety Summit.**

### ***Resources:***

Michigan Legislative Information: [michiganlegislature.org](http://michiganlegislature.org)



## SAFETY MANAGEMENT

### ***Issues Addressed:***

1. A systematic approach to address intersection safety is needed.
2. Intersection safety strategies should balance the competing demands of congestion reduction and safety enhancements including the interactive effects and conflicts of achieving one to the detriment of the other.
3. Provide quality information at the state, county, and local level where intersection safety can be best addressed.
4. A common goal for intersection safety is necessary to coordinate efforts by the police, engineers, educators, EMS, and others.

### ***Strategies:***

1. Develop a multi-disciplinary/multi-agency safety task group within the state and in each locality to address intersection safety issues.
  - Identify current activities by various groups or individuals
  - Establish communication systems to share information and data.
2. Incorporate safety in the planning process. Institutionalize the involvement of safety organizations in the development and review of safety plans and metropolitan planning organization products.
3. Develop a clearinghouse (help desk/web site) for intersection safety. This would be a centralized location for a variety of stakeholder groups to provide input.

### ***Near-term Action Plan:***

1. The GTSAC will continue to convene the Intersection Safety Task Force:
  - Explore the “help desk” concept (e.g., 1-800-NoCrash)
  - ***Explore a web site that houses a clearinghouse of information on intersection safety.***

2. The Intersection Safety Action Team will continue to monitor implementation of ISAP.

3. MDOT and OHSP will continue to promote safety-conscious planning at the MPO level:
  - Promote and support annual safety forums for each MPO area
  - Encourage MPO's to monitor crashes in their region and identify for their constituent agencies the high-crash locations that might be pursued for development of safety projects
  - Provide MPO's and counties with yearly intersection crash data.

4. Other activities within GTSAC that encourage communication throughout the network of safety professionals, particularly efforts to communicate with local partners.

5. **Include a breakout session at the annual Traffic Safety Forum hosted by MDOT and OHSP.**

## RESEARCH

### ***Issues Addressed:***

1. Reliable data is needed, but is not always available, to evaluate the effectiveness of safety countermeasures.
2. There is a need for focused research on intersection safety issues.

### ***Strategies:***

1. Conduct Research on Driver Information Countermeasures
  - Identify and prioritize gaps, prepare research problem statements to address the most critical knowledge gaps
  - Prepare a synthesis report on driver information countermeasures. Include a literature review and a survey. In addition, topics to be addressed include: dynamic signing, advisory speed signs/beacons, advance street name signs, larger and brighter warning signs, advance advisory flashing beacons, strobe light in signals, roadway illumination, how to accommodate high-risk road users and human factors/information overload.
2. Perform research on the benefits and costs of intersection safety countermeasures.
3. Conduct human factors research related to intersection safety. There is a need to identify drivers' thoughts and perceptions as they approach an intersection, and the types of mental limitations that exist (information overload, complexity of information and decisions, etc.).

### ***Near-term Action Plan:***

1. Analyze current crash data to determine the top intersection crash areas and/or issues.
2. MDOT will develop a program to conduct before-and-after studies of traffic safety engineering improvements around the state. Local and State Agencies would be able to apply to have a before-and-after study conducted on a specific traffic safety-engineering project. All completed studies would be made available on a web site. This initiative will help publicize the results of successful applications of safety improvements

**Issues Addressed:**

1. The ability of transportation professionals to identify and analyze intersections for safety improvements can be enhanced by improving the quality (e.g., coding, narratives, completeness, and accuracy) and timeliness of crash reports and data.
2. Computerized crash location identification is necessary for the successful system-wide analysis of the data.

**Strategies:**

1. Develop and maintain a continuing dialogue between users and collectors of crash data.
  - Ensure stakeholder participation at meetings (e.g., Data Action Team)
  - Obtain all points of view regarding needed changes in the crash report form
  - Develop a better understanding of training needs
  - Provide training and education on the uses and functions of crash data to the safety agencies, including enforcement personnel.
2. Develop/promote a standardized crash reporting system (eg. CPR /LEAMS) that:
  - Uses GIS/GPS.
  - Minimizes duplication of efforts across levels
  - Includes user-friendly applications
  - Uses hardware and software to increase accuracy of data location
  - Allows laptop data entry with logic checks (automated)
  - Has street name data base with logic check
  - Integrates software/hardware to other police duties
  - Develops reliability/other quality control measures
  - Surveys users of improved standardized crash reporting systems
  - Develops feedback loop and incorporates comments into revised systems
  - Allows identification of high crash locations
  - Consolidates crash data into a clearinghouse
  - Updates standardized crash data on an annual basis.
3. Maintain strong support and funding for development of an state-wide collision database and associated support and maintenance.
4. Develop a data warehouse that would provide for linkages among common databases.
5. Develop a highway physical features database.

**Near-term Action Plan:**

1. The GTSAC will continue to support multi-agency efforts for the ongoing crash system re-design.
2. The GTSAC will monitor effort to assure all targeted improvements will be realized.
3. The GTSAC will approach legislature for dedicated funding for crash collection, storage and dissemination.
4. State agencies will apply for federal funding grants available for improving crash data.

**Resources:**

Michigan Traffic Crash Facts: [Michigantrafficcrashfacts.org](http://Michigantrafficcrashfacts.org)

## SAFETY ANALYSIS TOOLS and PRACTICES

### ***Issues Addressed:***

1. A simple analysis system is needed to identify unsafe intersections.
2. Causal analysis of intersection crashes would be more accurate and complete if information on the state of the "environment" at crash locations were available (e.g., information on signal operation and design, and intersection layout can sometimes be related to driver behavior at an intersection).
3. There is a need to provide support at the local level in the areas of enforcement, engineering, education, and emergency management systems.

### ***Strategies:***

1. Conduct an inventory and analysis of existing intersection safety analysis tools. Steps include:
  - Identify user needs (vehicles, pedestrians, bicycles, etc.)
  - Determine available analysis tools
  - Determine shortfalls between needs and available tools
  - Reach consensus on critical tools that needs to be developed.
2. Institutionalize the use of tools in the safety planning process (e.g., crash prediction models).
3. Improve safety management to the extent feasible within state and local agencies by developing intersection inventories. Keep records on each intersection, including location, geometrics, equipment, and traffic control. This needs to be done on a system-wide basis.
4. Provide traffic engineering / safety support to local governments.
5. Adopt existing training programs, identify training gaps and create new training courses as applicable.
6. Perform yearly safety audits on state and local systems and provide results to all agencies.
7. Develop a Toolbox (Intersection Design and Operations Manual/Handbook)
  - Determine the "best" practices that integrate the requirements of vehicles, pedestrians, etc.
  - Synthesize, organize and identify tradeoffs
  - Develop case studies
  - Disseminate the practices (e.g., through ITE, LTAP, AASHTO)
  - Use Web-based training, checklists, and decision trees
  - Focus analysis tools through the use of the LTAP and other distribution mechanisms.

### ***Near-term Action Plan:***

1. The Intersection Safety Action Team will monitor systems that provide for the ability to identify and analyze high crash locations:
  - SEMCOG Crash Analysis Tool
  - RoadSoft tools for use by local agencies
  - Current MDOT tools and practices.
  - CPR tools

2. Establish peer review for the state and local agencies.

3. MDOT will reinstate a state level TOPICS (Traffic Operations Program to Increase Capacity and safety) program designed to identify intersection safety needs and propose solutions.
4. Establish sufficient staff positions at MDOT for internal crash review and analysis.
5. MDOT will provide analysis on a continuing basis to help communities (e.g., TOPICS).

6. **The GTSAC will develop, publish and promote the "Michigan Traffic Safety Fundamentals Handbook".**
7. **Leverage the current relationship with the LTAP (Local Technical Assistance Program) organization.**
8. **Bring the new FHWA/ITE Intersection Safety training courses to Michigan.**

### ***Issues Addressed:***

1. Within the highway safety community, there is a need to increase the knowledge base of effective safety improvements.
2. The operation and design of intersections often must balance the dual and conflicting objectives of operational efficiency versus safety.
3. Most systematic intersection safety programs at the state and federal level direct resources to high-volume urban intersections, to the exclusion of rural or low-volume intersections.

### ***Strategies:***

1. Increase intersection safety funding at state and local level
  - Increase safety program funds available for use by local governments.
  - 100% obligation of federal safety set-aside funds each year
  - Encourage MPO assistance to provide data for regional and sub-regional analysis to constituent agencies
2. Review and implement as appropriate the following documents/programs:
  - *AASHTO implementation guidelines that address signalized and unsignalized intersection accidents (NCHRP 17-18-03).*
  - Results of past and future FHWA *international intersection safety scans*.
  - AAA Road Improvement Demonstration Program conducted in Detroit and Grand Rapids.
3. Promote among safety and transportation professionals the benefits of proper countermeasures.
4. Establish grant and contract programs, with funding mechanisms, to institutionalize a strategic, statewide engineering approach to intersection safety, at the state and local level including but not limited to:
  - signal timing
  - traffic signal head and lamp visibility
  - unsignalized intersection safety improvements
  - signalized intersection safety improvements (expect individual Time-of Return analysis)
  - Evaluations of Roundabouts
5. Develop programs to provide more emphasis on low volume intersections.

- continued -

## ***Near-term Action Plan:***

1. MDOT and OHSP will combine efforts to promote and fund routine signal re-timing on a continuing basis for all signals in the state:
  - Funding to come from MDOT CMAQ source where possible; otherwise looking for non-dedicated safety funding such as STP
  - Possible funding by OHSP to support data collection and analysis
  - Develop a plan to implement the recently adopted MDOT clearance interval policy, statewide
2. MDOT and OHSP will combine efforts to develop and promote a multi-year plan to update all signal heads in the state to 12" lens and ensure proper visibility and positioning of signals.
3. MDOT will establish an intersection safety program for trunk line roads that recognizes and promotes a variety of known engineering countermeasures. Plan will categorically assure action each year in the following areas:
  - Signalized intersection improvements.
    - Identify and review high-crash signalized intersections per TSC
  - Un-signalized intersection improvements – implement in 2-4 TSC per year.
    - Identify and review high-crash un-signalized intersections per TSC
  - Design and construction of roundabout intersections on the trunk line. Evaluate effectiveness in crash reductions and crash characteristics.
4. MDOT and OHSP will combine efforts to promote intersection safety projects at local level:
  - More categorical safety funding to be reserved for local safety projects.
    - Funding reserved to support analysis and corrective action at unsignalized intersections
    - Funding reserved to support analysis and corrective action at signalized intersections
  - Increase funding support for consultant analysis of local data- both signalized and un-signalized.
  - Continue efforts to interest MPO staff and constituent agencies in monitoring and analysis of local crash data in general.
  - Re-instate the TOPICS program which was designed to identify intersection safety needs and propose solutions within targeted cities.
4. The Intersection Safety Action Team will promote where applicable, the design and construction of roundabouts as an initial design to achieve safety and/or traffic flow goals:
  - Trunk-line–MDOT will design at least one roundabout intersection and evaluate its effectiveness in both crash reduction and crash characteristics.
  - Local agencies–MDOT will encourage their field representatives at Region and TSC level to be receptive to local requests for installation of roundabouts on intersections involving trunkline routes.

## ***Resources:***

Driving Modern Roundabouts:

[wsdot.wa.gov/eesc/cae/DesignVisualization/Video/Portfolio/Modern\\_Roundabouts/index.htm](http://wsdot.wa.gov/eesc/cae/DesignVisualization/Video/Portfolio/Modern_Roundabouts/index.htm)

## RED-LIGHT RUNNING

### **Issues Addressed:**

1. In Michigan, red light runners are involved in only 15 percent of signalized intersection crashes, but account for 35 percent of the severe injuries and deaths in these crashes.
2. The use of camera technology as a red light enforcement tool is a controversial topic that is often debated more on emotion than fact.
3. A track record of red light camera programs has been developed in the United States that can be used to sort out good and bad consequences of these programs, and can guide future legislation. Proposed Michigan camera legislation (current and past) does not always incorporate wording that would avoid pitfalls that other programs have experienced.
4. Engineering countermeasures to red light running are frequently overlooked or under-researched.

### **Strategies:**

1. Measure and identify the frequency of red light running in Michigan.
2. Educate motorists on red light running issues: severity of crashes, how to react to yellow signal.
3. Identify and implement promising engineering countermeasures to combat red light running.
  - Reference ITE Publication, "Making Intersections Safer: A Toolbox of Engineering Countermeasures for Red Light Running".
4. Provide information to enforcement agencies on the availability, cost and effectiveness of traffic signal accessory lights that help police identify a signal indication from downstream direction.
5. Develop selective enforcement programs to focus on intersections where crashes have occurred due to red light running. The goal of this program should be to change driver behavior using visible enforcement patrols, citations and publicity announcing the selective enforcement program and the targeted intersections.
6. Assemble information that will be useful to the Michigan Legislature and others regarding red light camera programs:
  - attitude of Michigan motorists toward red light running and red light camera enforcement
  - balanced information of the benefits and pitfalls of red light camera programs, as noted in other areas throughout the United States
  - Examples of model legislation from other states
  - Positions, if known, of state and national transportation-related organizations.

### **Near-term Action Plan:**

1. The GTSAC will oversee objective surveying of Michigan citizens to determine their current level of:
  - concern regarding red light running
  - understanding and response to yellow signal
  - understanding and support for red light camera enforcement.
2. OHSP will undertake research/data collection to determine frequency and severity of red light running problem in Michigan cities, and provide insight on potential for improvement:
  - Tabulate and analyze Michigan data to determine the frequency and severity of crashes that result from red light violations.
  - AAA/Grand Rapids experiment to determine extent of red light running at certain intersections, and improvement in driver behavior to be gained by use of engineering countermeasures
  - The Troy Police Department experience with use of traffic signal accessory light to aid traditional enforcement of red light running
  - Review all current systems addressing red light running.
3. The GTSAC will coordinate with FHWA to develop and maintain a presentation that discusses the pros and cons of red light camera programs, with examples of good and bad programs across the country. This information will be offered to the legislature and other groups that take up the issue of camera enforcement.

### **Resources:**

Stop Red Light Running Home page: [stopredlightrunning.com](http://stopredlightrunning.com)

## ENFORCEMENT

### ***Issues Addressed:***

1. The effect of enforcement strategies on intersection safety has not been as carefully documented or widely discussed.
2. There may be opportunities to more fully-integrate enforcement strategies into intersection safety initiatives.

### ***Strategies:***

1. Analyze current enforcement methods in relation to intersection safety to determine possible improvements.
2. Analyze the current "Click it or Ticket" and "You Drink and Drive. You Lose" enforcement campaigns in relation to its effect on intersection crashes and citations.
3. Include enforcement in the discussions when analyzing engineering and educational countermeasures

### ***Near-term Action Plan:***

1. **Present at existing law enforcement forums/meetings, traffic safety issues including intersection safety.**

2. Each individual enforcement agency should consider selective enforcement at targeted intersections within their jurisdiction as a means of reminding motorists which intersections are experiencing the most crashes and as a way to remind motorists to drive with proper driving behavior. Elements of this type program would include:
  - Engineering assistance to identify high-crash locations and analyze driving behavior related to the crashes at that location (for example, red light running or failure to yield)
  - Publicity of the program to expand the driving public's awareness of the locations and the institutional effort to improve driving behavior.

### ***Resources:***

Michigan State Police: [michigan.gov/msp](http://michigan.gov/msp)

International Association of Chiefs of Police: [www.theiacp.org/](http://www.theiacp.org/)

Michigan Association of Chiefs of Police: [michiganpolicechiefs.org/page.cfm/1/](http://michiganpolicechiefs.org/page.cfm/1/)



### **Issues Addressed:**

1. Intersection safety needs to be recognized and acknowledged as a public problem. For example, airplane safety is seen as a much more serious concern for the public although the number of crashes, fatalities, and injuries is much, much lower than both traffic and intersection crashes. (There were no commercial airline crashes in the United States in 2002.)
2. Public education should improve driver performance and reduce the likelihood of crashes in areas exposed to new intersection designs, new operational strategies, or proposed new enforcement techniques.

### **Strategies:**

1. Use communications specialists to:
  - Conduct market research
  - Communicate intersection crash facts (e.g., demonstrate and illustrate the gravity of consequences for violating the law at intersections...the amber light law).
2. Develop a communication plan to disseminate information to officials in state and local agencies and the public.
  - Use the GTSAC Listserv to communicate with all safety partners.
3. Develop and hold a Multi-state Intersection Safety Conference
  - The GTSAC should host a multi-state Midwest Intersection Safety Conference. A similar conference was held in Baltimore in June 2003 and discussed intersection safety initiatives and best practices. Engineers, law enforcement, and safety professionals from the Midwest would be brought together to share information on the state of the practice on intersection safety.

### **Near-term Action Plan:**

1. A public communication plan will be created for the following:
    - Develop and maintain a presentation that discusses the pros and cons of red light camera programs, with examples of good and bad programs across the country. This information will be offered to the legislature and other groups that take up the issue of camera enforcement.
    - Develop PSA's on the importance of intersection safety
  2. Publicize the ISAP at forums, meetings and seminars.
  3. **Attend the ITE Technical Conference regarding Intersection Safety in March 2004.**
  4. Develop a training plan or provide for training resources:
    - Michigan Technological University will begin providing a "Intersection Safety for Non Engineers" class in 2004
    - Ask both the Departments of Education and State to update the intersection safety information provided in the driver education curriculum and the related training materials, and in other publications such as the *What Every Driver Must Know*
    - Review other training resources, traffic safety publications, etc. and offer suggestions (e.g. elder driver classes, court-ordered driver safety classes, etc.)
    - Solicit the input and support of our partners including higher-education institutions (MSU, WSU, UMTRI, Michigan Tech)
    - Seek out and share other scholarly publications (i.e., the Mid-Atlantic Safety Conference).
    - Ensure information is communicated (i.e., mailings and web sites)
5. The Department of Education will develop a statewide media Intersection Safety campaign:
    - Includes a media strategy
    - Increases public awareness through editorials, radio, public service announcements, etc.
    - Uses media to explain how to use new highway improvements or operational treatments
    - Uses media to provide safety arguments for enforcement activity
    - Uses information on best practices/approaches from states and locals to enhance media campaign materials.

### **Resources:**

*Advocates for Highway and Auto Safety:* [saferoads.org/issues/fs-intersection.htm](http://saferoads.org/issues/fs-intersection.htm)

*FHWA Intersections:* [safety.fhwa.dot.gov/programs/intersections.htm](http://safety.fhwa.dot.gov/programs/intersections.htm)

*Intersection Cameras-Winnipeg Police:* [city.winnipeg.mb.ca/police/safestreets/camera.html](http://city.winnipeg.mb.ca/police/safestreets/camera.html)

## ACRONYMS

AAA	American Automobile Association
AASHTO	American Association of State Highway and Transportation Officials
CMAQ	Congestion Mitigation and Air Quality
CPR	Crash Process Redesign
EMS	Emergency Management System
FHWA	Federal Highway Administration
GIS	Geographic Information System
GPS	Global Positioning System
GTSAC	Governor's Traffic Safety Advisory Commission
ISAP	Intersection Safety Action Plan
ISC	Intersection Safety Committee
ITE	Institute of Transportation Engineers
LEAMS	Law Enforcement Agency Management System
LTAP	Local Technical Assistance Program
MDE	Michigan Department of Education
MDOS	Michigan Department of State
MDOT	Michigan Department of Transportation
MPO	Metropolitan Planning Organization
MSU	Michigan State University
NCHRP	National Cooperative Highway Research Program
NHI	National Highway Institute
OHSP	Office of Highway Safety Planning
PSA	Public Service Announcement
STP	State Transportation Plan
TOPICS	Traffic Operations Program to Increase Capacity and Safety
TSC	Transportation Service Center
WSU	Wayne State University

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